

**Remarks:**

**Status of Claims**

Claims 21-48 were previously pending. By way of this Amendment, claims 21,31, 36 and 38 are amended, claims 29-30, 34-35, 37, and 46-47 are canceled, and claims 49-53 are newly added. Thus, claims 21-28, 31-33, 36, 38-45, and 48-53 are currently pending with claims 1, 36, and 49 being independent.

**Office Action**

In the December 29, 2005, Office Action, the Examiner rejected claims 34-35 and 46-47 under 35 USC 112, first paragraph, rejected claims 21-48 under 35 USC 112, second paragraph, indicated that claims 28 and 30 would be allowable if rewritten in independent form, and rejected claims 21-27, 29, and 31-48 under 35 USC 102 and 103 in view of various combinations of Krumm (U.S. Patent No. 5,546,844), Petrovich (U.S. Patent No. 5,183,958), Manshel (U.S. Patent No. 3,118,243), Hartley (U.S. Patent No. 2,935,912), Creedon (U.S. Patent No. 4,774,872), and Bofors (GB 603,976). Applicant respectfully submits that the amendments and arguments made herein overcome the Examiner's rejections and place all currently pending claims in a condition for allowance.

**Rejections under 35 USC 112**

Applicant has canceled claims 34-36 and 46-47 and removed the identified "thin-walled" language from all independent claims. Thus, the Examiner's rejections under 35 USC 112 are no longer warranted.

Claims 21-28, 31-33, and 49-53

In the December 29, 2005, Office Action, the Examiner indicated that claims 28 and 30 would be allowable if rewritten to overcome the rejections under 35 USC 112, second paragraph, and to include all the limitations of their base claims and any intervening claims (Office Action, paragraph 14). As discussed above, the basis of the Examiner's section 112 rejection has been removed from all independent claims. Further, claim 21 has been amended herein to include all limitations of claim 28, and any intervening claims, and new claim 49 has been added and includes all the limitations of claim 30 and any intervening claims. As such, claims 21-28, 31-33, and 49-53 are now in a condition for allowance.

Claims 36, 38-45, and 48

Claim 36, from which claims 38-45 and 48 depend, has been amended herein to include the features originally recited in claim 37, now canceled. Thus, claim 36 now recites a firearm barrel including a breech portion having a minor bore and a major bore coaxial with the minor bore, with an elongate rifled insert member supported in the minor bore of the breech portion and a rigid elongate tubular sleeve supported in the major bore.

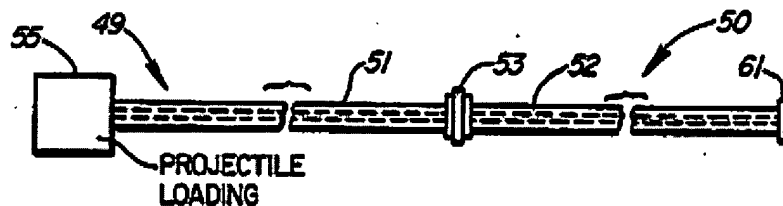
These features as originally presented in claim 37 were rejected by the Examiner under 35 USC 102(b) as being anticipated by Creedon (Office Action, paragraph 12). Specifically, the Examiner contends that Creedon's sleeve elements 32 shown in FIG. 5 constitute major and minor bores. However, as is clearly shown in FIG. 5, reproduced below for the Examiner's reference,



Assuming *arguendo* that the definition of “bore” is expanded beyond all reasonable meaning, the sleeve assembly 36 recess that retains the pistons 30 (the Examiner’s “sleeves”) could unreasonably be construed as a “major bore.” However, the recess that retains the piston 30 is not

“coaxial” with the projectile bore, and thus the piston recess and projectile bore would not disclose or suggest the recited feature of a “breach portion having a minor bore and a major bore **coaxial** with the minor bore.”

Additionally, Creedon’s barrel sections 51, 52 (the Examiner’s insert members) are not supported in a minor bore as recited in claim 36. Instead, as stated above, the barrel sections 51, 52 are merely screwed together utilizing the sleeve assembly 36. Further, Creedon’s tubular sleeve is not retained within a major bore as now recited in claim 36, as Creedon’s sleeve assembly 36 is the major and minor bore according to the Examiner.



Creedon (FIG. 6)

Also, as is clearly shown in FIG. 6, reproduced above for the Examiner’s reference, Creedon does not disclose a elongate tubular sleeve that surrounds and insert member “along at least a majority of the length of the insert member” as is recited in claim 36. Instead, Creedon’s “sleeve” (joint 53) surrounds the barrel sections 51, 52 only along a minute portion of the barrel sections. As such, Creedon does not disclose or suggest all features recited in claim 36.

As is also clearly shown in FIG. 6, Creedon’s breach portion (the tubing in proximity to loading means 55) does not include a major and minor bore. Instead, according to the Examiner, the portion of Creedon that allegedly includes a major and minor bore is the joint 53, which cannot be

considered a “breech portion” based on any reasonable definition of the phrase. Instead, using the terminology of the present invention, the joint 53 would be in proximity to a muzzle portion (as recited in claim 42). Thus, Creedon’s joint 53 does not disclose or suggest a “breech portion having a minor bore and major bore coaxial with the minor bore” as is currently recited in claim 36.

Additionally, claim 36 now recites a “rifled” inset member. As Creedon is directed at a smoothed barrel apparatus for an electromagnetic rail gun, and not a firearm, Creedon does not disclose or suggest a rifled barrel or a rifled insert member. As such, claim 36 is additionally allowable for this reason.

The Examiner’s other cited references, alone or in combination with Creedon, do not disclose or suggest all features currently recited in claim 36. Specifically, Krumm, Hartley, and all other prior art of record fails to disclose a breech portion having a minor bore and a major bore coaxial with the minor bore, a rifled insert supported by the minor bore, and a rigid sleeve supported in the major bore as recited by claim 36. Thus, claims 36, 38-45, and 48 are now in allowable condition.

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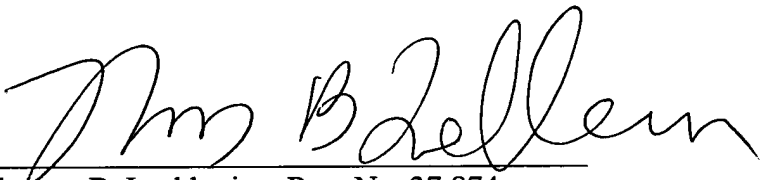
Conclusion

Applicant respectfully submits that claims 21-28, 31-33, 36, 38-45, and 48-53 are now in allowable condition and requests a corresponding Notice of Allowance. In the event of further questions, the Examiner is urged to call the undersigned. Any additional fee which might be due in connection with this application should be applied against our Deposit Account No. 19-0522.

Respectfully submitted,

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